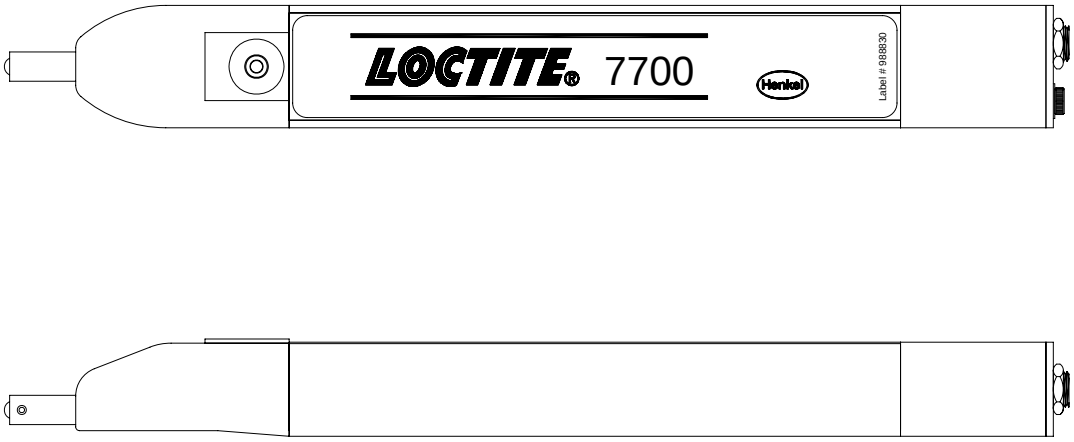
EQUIPMENT
Operation Manual



Loctite® Handheld LED Light Sources

Part Number 98591 Model 7700 Light Source
Part Number 98595 Model 7703 Light Source

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1. Please Observe the Following

1.1 Emphasized Sections

⚠ **WARNING!**
Refers to safety regulations and required measures that protect the operator or other persons from injury or danger to life.

! **Caution!**
Emphasizes what must be done or avoided so that the unit or other property is not damaged.

☞ **Notice:**
Gives recommendations for better handling of the unit during operation or adjustment, as well as for service activities.

1.2 Items Supplied

1 Loctite® Handheld LED Light Source
1 AC Adapter/Charger
1 User's manual

1.3 For Your Safety

For safe and successful operation of the unit, read these instructions completely. If the instructions are not observed, the manufacturer can assume no responsibility. Be sure to retain this manual for future reference.

⚠ **WARNING!**
While the Loctite® Handheld LED Light Source has minimal output in the UV-A range, the use of UV safety glasses that conform to ANSI Z87.1/CSA Z94.3 is recommended when operating the unit.

⚠ **WARNING!**
Never directly expose skin to light source.

⚠ **WARNING!**
Never look into the end of the light source.

⚠ **WARNING!**
Damage to the AC Adapter/Charger power cord can result in contact with live electrical parts. Check the power cord before each use. If the power cord is damaged, do not operate.

The unit may be repaired only by a Loctite authorized service technician.

! **Caution!**

This unit will heat up under certain operating conditions. The unit should not be left on continuously. Avoid operating the unit at duty cycles greater than 30% with on times of 15 seconds or greater. Longer exposure times are possible if the unit off time is increased to allow the unit to cool in between exposures. The unit has an internal mechanism that shuts it off if a preset internal temperature is reached during operation.

1.4 Field of Application, (Intended Usage)

This Loctite® Handheld LED Light Source is designed for use with light cure products that cure when exposed to ultraviolet and/or visible light. The system can be operated manually or controlled with an external switch. The system is design for intermittent duty cycle.

2. Description

2.1 Theory of Operation

The Loctite® Handheld LED Light Source utilizes a focused LED light source. The unit can be powered by its internal rechargeable batteries or directly from the AC Adapter/Charger, 989626. When the unit is switched on, the proper electrical power is supplied to the LED resulting in immediate full power. Curing will take place when the light is directed at the liquid adhesive. The time required to complete the curing process depends primarily on the offset distance from the end of the wand to the surface of the adhesive and the type of adhesive being used.

The exposure time can be controlled in either the manual mode or through the use of an external switch. The unit can be run from the rechargeable batteries or directly from AC power via the AC Adapter/Charger.

The unit should not be left on continuously. Avoid operating the unit at duty cycles greater than 30% with on times of 15 seconds or greater. Longer exposure times are possible if the unit off time is increased to allow the unit to cool in between exposures. The unit has an internal mechanism that shuts it off if preset internal temperature is reached during operation. Should this occur, the unit would not operate until the unit has cooled below this thermal limit.

The Loctite® Handheld LED Light Source can also be actuated by a remote foot switch, P/N 98440.

2. Description (continued)

2.2 Operating Elements and Connections, refers to Figure 1

1. Power Inlet Module
   Connect AC Adapter/Charger to power inlet module.
2. On/Off Switch
   Depressing the On/off Switch causes light to be irradiated from the unit.
3. External Switch Connection
   The Loctite® Handheld LED Light Source can also be actuated by an external foot switch, Loctite® P/N 98440.
4. Low Power/Thermal Limit Indicator
   When illuminated a red light will be visible by the on/off switch. This indicates that the battery charge has dropped below the charge needed to maintain acceptable output or that the unit has exceeded a pre-set internal operating temperature. The unit can be used while it is charging, however, it will take longer to reach its full charge. If the unit has exceeded its operating temperature, the unit should be allowed to cool prior to additional use.

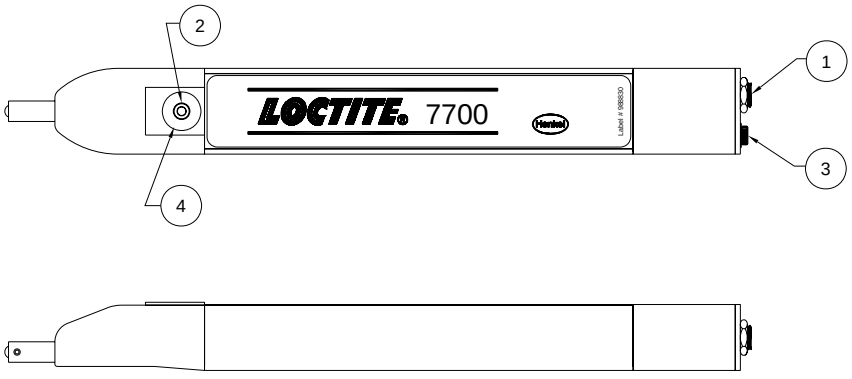


Figure 1

3. Technical Data

3.1 Energy Requirements

Input Power: 100-240 VAC, 47-63 Hz

3.2 Dimensions

Width	1.0 inch
Depth:	0.75 inches
Height:	9.0 inches
Weight:	0.44 pounds

3.3 UV Output Characteristics	**7700 Units**	**7703 Units**
Typical Output *:	1.0 W/cm^2	>3 W/cm^2
Spectral Output Range:	390 – 420 nm	Proprietary
Primary Peak:	405 nm	Proprietary

(*Exact output measurement is dependent on the brand and calibration method of the meter used. These measurements were made with the Loctite® Zeta® 7011-V Dosimeter, P/N 98089 and 98453 Adapter.)

Note: For intensity measurements of LED devices emitting at the 405 nm wavelength, the Zeta 7011-V meter can be used to determine LED degradation. However, because the 405 nm wavelength is just outside the optimal absorbency range of the Zeta 7011-V, the reading could be lower than it actually is. Also, intensity readings from meter to meter may vary. That is to say, if two meters are used to measure the same LED device, the readings could be different. As long as the same meter is always used to measure the same 405 LED device, the Zeta 7011-V can be used to measure intensity degradation.

4. Operating the Unit

4.1 Charging the Unit

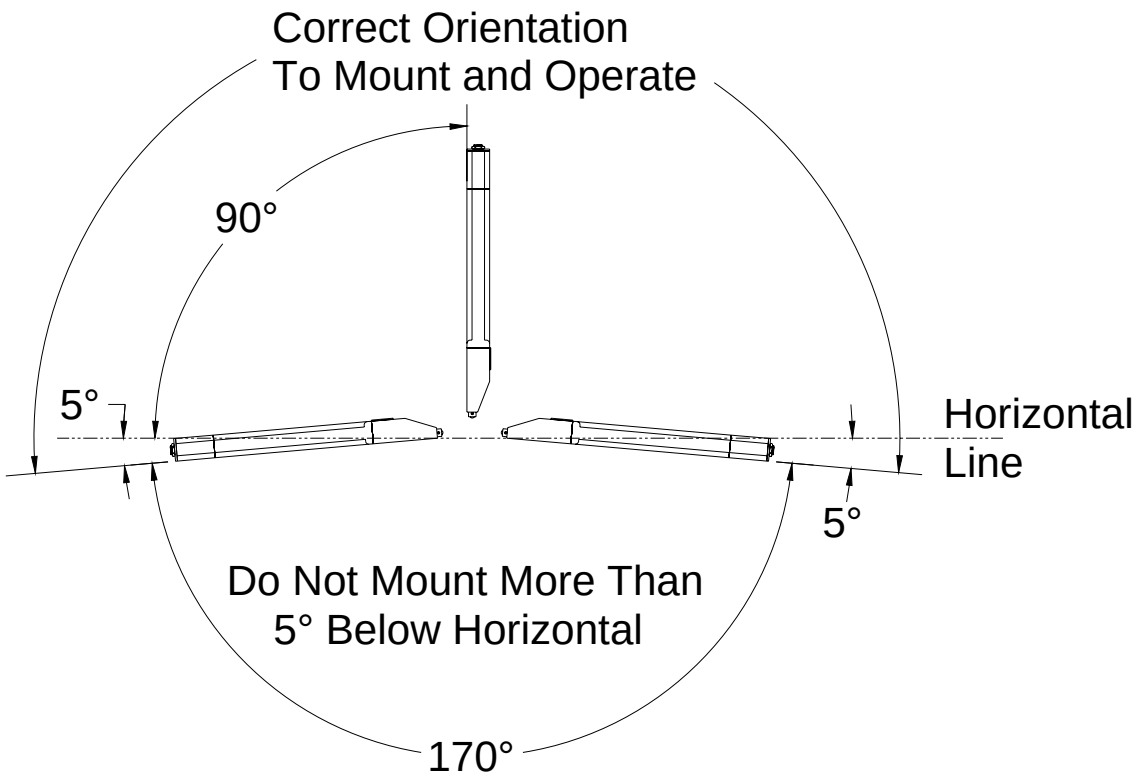
Caution!

Be sure to charge the batteries for 12 hours prior to using the unit. Failure to completely charge the batteries may result in limited operation time before charging is required. Use only Loctite® Charger P/N 989626, to charge the unit. No other chargers will work and will damage the unit.

4. Operating the Unit (continued)

4.2 Recommended Installation and Operation

When operating in a hand held mode or permanently mounted, the following orientation should be observed.



4.3 Powering Up

1. Depressing the on/off switch on the unit causes the unit to emit light from the wand tip.

2. When the batteries are completely charged, the unit should operate for approximately 45 minutes at a 30% duty cycle.

Notice:

The unit should not be left on continuously. Avoid operating the unit at duty cycles greater than 30% with on times of 15 seconds or greater. Longer exposure times are possible if the unit off time between exposures is increased to allow the unit to cool. The unit has an internal mechanism that shuts it off if a preset internal temperature is reached during operation. Should this occur, the unit would not operate until the unit has cooled.

4. Operating the Unit (continued)

4.4 ON/Off Switch Warning – Low battery, High Temperature

A red indicator light will come on next to the on/off switch if the battery voltage gets too low or if the unit gets too hot for optimum operation. To determine which condition the warning is due to, connect the charger to the unit. The red light should shut off if the batteries are low when you actuate the on/off switch and you can continue to operate with the charger connected or allow the unit to charge for 12 hrs before using the unit without the charger connected.

If the red indicator light continues to illuminate once the charger has been connected and you depress the on/off switch, then the indicator light has come on because the optimum operating temperature of the unit has been exceeded. The unit will operate once it has sufficiently cooled below a pre-set limit.

Tips for cool operation:

1) Avoid operating the unit in a high heat area or near heat sources.

2) Place the unit on a cool surface in between cure cycles.

3) Place the unit in front of a fan in between cure cycles.

4) Mount the unit to a stand and direct air from a fan toward the unit.

5) Alternate using two units. When one reaches the temperature limit, place on a cooling surface and begin curing with the second unit. Alternate as needed during operation.

6) For mounted applications, a heat sink can be clamped to the unit to help dissipate heat.

If your application demands curing cycles that cause the unit to reach the thermal limit consistently, contact Henkel Corporation at 860-571-5209 for alternative solutions for cooling the unit.

4.5 Checking the Unit's Output

To check the unit's output, insert the LED tip directly into the UVV meter adapter 98453. Hold the LED unit perpendicular and flush against the adapter plate. Irradiate the sensor for 5 seconds to check the system output.

4. Operating the Unit (continued)

4.6 Using Foot Switch

The Loctite® Handheld LED Light Source can also be actuated using a foot switch, P/N 98440. By depressing the foot switch, the light will turn on. Once the foot switch is released the light will turn off.

4.7 Replacing Batteries

After extended use, the rechargeable batteries may experience a diminished capacity for holding a charge. If the batteries need to be replaced, please contact Henkel Equipment Service Group at (800) 562-8483.

5. Care and Maintenance

☞ **Notice:**
It is recommended that the light output from the light source be monitored regularly using a Loctite® Zeta® 7011-V radiometer, P/N 98089.

! **Caution!**
It is recommended that the end of the light source be positioned no closer than 0.25" inch from the Loctite® product being cured to minimize adhesive contamination on the light source tip. If adhesive should contaminate the light source tip, be sure to clean the light source tip to maximize the unit's effective output.

☞ **Notice:**
Vapors from some products may gradually accumulate on the end of the light source, reducing the light output. It should be inspected regularly and cleaned as necessary using isopropyl alcohol and a soft, clean cloth.

6. Troubleshooting

Type of Malfunction	Possible Cause	Correction
No light is irradiated from unit when on/off switch is depressed.	- Batteries are not charged. - Unit has exceeded thermal operating limit. - Defective Switch.	• Plug unit into AC Adapter/Charger. Charge Batteries. • Allow unit to cool • Call 800-562-8483.
No light is irradiated from unit when on/off switch is depressed. Red light is seen around circumference of on/off switch.	- Batteries have too little charge to power unit. - Unit has exceeded thermal operating limit	• Plug unit into AC Adapter/Charger. Charge batteries. • Allow unit to cool
All system functions appear to be operating, but the product does not cure completely, or if a radiometer is used to monitor the UV output, the power is low.	- End of light guide has an accumulation of product or other contaminants	• Clean light guide with soft cloth and isopropyl alcohol.

7. Documentation

7.1 Replacement Parts and Accessories

Loctite Part Number	Description
98452	Safety Glasses
98089 98453	Loctite® Zeta® 7011-V Dosimeter-Radiometer Dosimeter Adapter Kit
98440	Foot Switch
98592	Remote mount heat sink and continuous duty power supply
960356	Timer
988774	Constant on plug
989626	Universal AC Adapter/Charger
8900494	LED Replacement Battery Kit

EQUIPMENT WARRANTY
For Loctite® Handheld LED Light Source

Henkel Corporation warrants, to the original purchaser for a period of 1 year from date of delivery, that the Loctite® Handheld LED Light Source sold by it is free from defects in material and workmanship. Henkel will, at its option, replace or repair said defective parts.

This warranty is subject to he following exceptions and limitations.

1. **Purchaser Responsibilities – The Purchaser shall be responsible for:**
   -Normal maintenance and minor adjustments of the equipment as outlined in the Equipment Manual.
   -Notification to Henkel of the need for warranty service.
   -Any cost of travel or transportation connected with warranty repair.
   -All cost associated with investigating or correcting any failure caused by the purchaser's misuse, neglect or unauthorized alteration or repair.
   -All costs attributed to accident or other factors beyond Henkel's control.

2. **No warranty is extended to perishable items, such as:**

   -Fuses -Switches -Batteries

3. **The purchaser must provide proof of purchase (original sales receipt, includes price paid, date of purchase).**

No warranty is extended to any equipment, which had been altered, misused, neglected or damaged by accident.

Henkel reserves the right to make changes in design and/or improvements to its equipment without obligation to include these changes in any equipment previously manufactured. Correction of defects by repair or replacement shall constitute fulfillment of all warranty obligations on the part of Henkel Corporation.

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